

## **CHRONIC ALCOHOLISM:**

### **A Survey of the Incidence in Downe Hospital Area**

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MORE scientific interest in the incidence of chronic alcoholism is now being shown and a "Memorandum on Alcoholism" has recently been prepared by a Joint Committee of The British Medical Association and the Magistrates Association (1961). The need for more intensive research has been emphasized, especially into the nature and size of the problem.

Assessments of the incidence of chronic alcoholism in various countries have usually been based on the estimation formula devised by E. M. Jellinek and adopted by the World Health Organisation (W.H.O.) Expert Committee on Mental Health Alcoholism Sub-Committee 1951. This formula assumes that if the percentage contribution of alcoholism to cirrhosis of the liver is known, it is then possible to determine from reliable autopsy reports the total number of alcoholics with complications existing in a population in any given year. Recently there has been severe criticism of the accuracy of the original formula and modifications have been suggested by Seeley (1959) and Brenner (1959). Jellinek (1959) has admitted that the formula should no longer be retained and that field studies are necessary.

This publication reports a field study of the incidence of chronic alcoholism in a rural community in which we were intimately concerned. The sample analysed is small but it is suggested that further personal studies of this type from other areas in Northern Ireland would result in a more accurate estimate of the size of the problem.

#### **MATERIAL.**

The area studied was that served by the Downe Hospital, Downpatrick, to which, in 1958, we were acting as Consultant Physicians. We thus had close personal contact with all the practitioners using the hospital and a fairly intimate knowledge of the countryside and its population. The total population of all the practices in this zone in that year, obtained from the General Health Service Board for Northern Ireland, was 40,216. The area involved approximates to the two Urban Districts of Downpatrick where the County Mental Hospital is also sited and that of Newcastle, with the Rural District of Downpatrick. The predicted total population for these districts calculated from the 1951 Census for Northern Ireland (Registrar General, 1953), and making allowance for an intercensal increase, was 40,024, which agrees closely with the actual number obtained from the Board. It was possible, therefore, to use the 1951 Census figures with fair accuracy, and these have been applied in the calculations. In the county of Down the percentage of adults of over 19 years was 65, and males and females

made up 46.3 and 53.7 per cent. of the population respectively. The predicted population for the county in 1958 was 251,300 (personal communication, Registrar General).

#### METHODS.

Each General Practitioner was interviewed personally and given a form to complete in respect of each chronic alcoholic in his practice, giving details of age, sex, marital state, number of children, occupation, war service, age at onset of alcoholism, the usual intoxicants preferred and details of any previous mental hospital treatment.

Chronic alcoholism was defined as the habit of consuming intoxicants to such an extent as to lead to interference with the patient's work, disturbance of his domestic or social life, and/or damage to his mental and physical health.

Only three out of the seventeen practices serving the area could not be prevailed upon to co-operate. The remaining fourteen gave every assistance and represented in all 33,174 out of a total of 40,216 patients under the care of general practitioners in the area.

TABLE 1.  
GENERAL RESULTS.

Alcoholics in Sample	-	-	-	-	-	-	46
Number in Sample	-	-	-	-	-	-	33,174
Total Population of Downe Hospital Area	-	-	-	-	-	-	40,216
Sample as percentage Total Population	-	-	-	-	-	-	82.5
Adults as percentage Total Population	-	-	-	-	-	-	65.7
Estimated Alcoholics in Downe Hospital Area	-	-	-	-	-	-	56
Rate per 100,000 Adults	-	-	-	-	-	-	214
Estimated Alcoholics in County Down	-	-	-	-	-	-	350
Total Alcoholic Admissions to County Mental Hospital in 1958	-	-	-	-	-	-	26
Alcoholic Admission Rate to Mental Hospitals per 100,000 adults	-	-	-	-	-	-	15.7

#### RESULTS.

The general results are shown in Table 1, where it may be seen that there were forty-six persons diagnosed as chronic alcoholics in the fourteen practices co-operating. From these figures and the number in the sample the rate per 100,000 adults was estimated at 214 in the Downe Hospital Area. Calculating on this basis, the incidence for Co. Down is estimated at 350 chronic alcoholic patients, of which twenty-six were admitted to the area Mental Hospital for treatment.

More detailed information about these patients is given in Table 2, where it may be seen that males predominated over females in a ratio of over 10/1 and married men over single, divorced or widowed men in a ratio of 2/1. Each man who had been married had on the average a family of four children. War

service was undertaken by only three affected males. The average age of the group was 53 years. In most patients, chronic alcoholism had arisen in early adult life; on average at 28 years of age. The majority of sufferers were farmers and shopkeepers, falling into Social Class II, a class which included four publicans. Whiskey was the usual drink preferred, although eleven persons in the lower social classes were stated as liable to drink any intoxicant.

TABLE 2.  
PERSONAL DETAILS OF SAMPLE.

Sex	-	-	-	42 Males	4 Females				
Marital State	-	-	-	30 Married	10 Single	1 Divorced	5 Widowed		
Previous Treatment	-	-	-	20					
Age	-	-	-	53.04 years	SD 11.53				
Age at Onset	-	-	-	28.02 years	SD 9.3				
War Service	-	-	-	3					
Children	-	-	-	124					
Social Class	-	-	-	I 4	II 21	III 10	IV 2	V 9	
Usual Intoxicant	-	-	-	Spirits	-	-	-	-	32
	-	-	-	Wine	-	-	-	-	2
	-	-	-	Beer	-	-	-	-	1
	-	-	-	Anything including Methylated Spirit	11				

#### DISCUSSION.

The World Health Organization Alcoholism Sub-Committee of the Expert Committee on Mental Health (1951) estimated the total alcoholism rate in England and Wales in 1948 to be 1,100 per 100,000 adults, but admitted that this was hardly better than a guess. These figures were based on the Jellinek estimation formula. The total alcoholism rate in the small area of Northern Ireland which we have investigated at 214 per 100,000 adults is obviously nowhere near this figure (1,100 per 100,000), and is much closer to the rate of 110 per 100,000 adults quoted in the large field study of Parr (1957). Parr received replies from 369 practitioners in the United Kingdom and his was the first attempt at assessment of a large field sample population in this country. He used the definition of chronic alcoholism of the World Health Organization Alcoholism Sub-Committee (1952): "Alcoholics are those excessive drinkers whose dependence upon alcohol has attained such a degree that it shows as a noticeable mental disturbance or an interference with their bodily and mental health, their inter-personal relationships and their smooth economic functioning, or who show the prodromal signs of such developments. They therefore require treatment." Our own definition and results are comparable. The figures obtained in our survey are, of course,

limited strictly to the small district concerned, but owing to personal contact are probably as accurate as this type of study can produce. As Glatt (1961) has pointed out, Parr's estimate may be low owing to a natural concealment of alcoholism from the doctor, but in a country area such as we have surveyed this is hardly possible. It must be admitted, of course, that any figures are greatly influenced by a practitioner's own attitude to the problem.

The sex ratio of over 10/1 in favour of males is very different from Parr's English figures of 2.2/1 in his series or even 3.1/1 in the 1952 Mental Hospital Survey. It is likely that different social habits between the two countries are responsible. In Irish country districts female drinking in public-houses is not as yet customary, and Parr's figure for rural districts gave a higher male preponderance at 5/1. This would suggest that female alcoholism was much more prevalent in cities and industrial environments where the social conscience is not so strong.

Mental hospital statistics do not give the true size of the problem. Out of our series of forty-six chronic alcoholics only twenty had ever had treatment in a mental institution, and for the whole county of Down in 1958 there were only twenty-six alcoholics admitted to the area mental hospital out of an estimated total for the county of 350. Figures for the previous year (1957) with twenty persons requiring mental hospital treatment were comparable, and of these there was a preponderance of males in the ratio of 9/1. Enquiries at that time suggested an alcoholism rate of 1.2 per practice of 2,000 persons (Grant, 1959).

Comparison of the marital status of alcoholics in the area with the census figures for the county did not suggest any significant influence nor was war service related. Money was to some extent important in that the sample showed most of those affected to be in the higher social classes. The relatively early age of onset of alcoholism in the group may be of significance indicating a strong predisposition. Unfortunately we have no data to suggest whether this is mainly due to heredity or environment.

Popham and Schmidt (1958) gave the following figures for consumption of alcohol and the percentage contribution of beer, wine and spirits to the total:

	BEER	WINE	SPIRITS	IMPERIAL GALLONS PER ADULT
United Kingdom, 1955 -	82	4	14	1.25
Ireland, 1954 -	73	4	23	0.95

These figures suggest that although the total alcohol consumption in Ireland is lower per person, yet more of it is taken in the form of spirits. This observation is supported by the alcoholic preference shown in this study. Comparable figures for occasional consumers of alcohol are not obtainable but these authors quote the New York Herald Tribune World Poll as stating that in Great Britain 73 per cent. of adults use alcohol but only 11 per cent. frequently. If this figure applies to Ireland, out of habitual users only 1 in 55 becomes a chronic alcoholic.

It is possible that our estimation rate of the incidence of chronic alcoholism may be higher than that of the United Kingdom because of the higher spirit consumption. Perhaps also there may be some racial lowering of resistance to

alcoholism as suggested by Williams (1947). Our results for the Downe area nevertheless are much below those suggested by the World Health Organization and it seems probable that by personal contact higher figures for the United Kingdom would be obtained than the 110 per 100,000 adults arrived at by Parr. Estimates for rural areas might be obtained by physicians in county hospitals with reasonable accuracy but figures from large towns would probably be artificially low because of the shifting nature of the population resulting in less personal relationship between some patients and their family doctors. This is especially the case with patients as unreliable as the chronic alcoholic. It would be of value, however, to check on Parr's figures by a series of local investigations either individually undertaken or under a central direction.

#### SUMMARY.

The alcoholism rate for the Downe Hospital Area in 1958 was 214 per 100,000 adults. This was the result of a direct field study. Fewer than half of such persons had ever had mental hospital treatment and whiskey was the drink of choice. The value of further small personal field studies in arriving at an accurate national estimate of the incidence of chronic alcoholism is advocated.

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